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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,110	06/25/2004	Hiroshi Matsuoka	1034232-000011	7915

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BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

MESH, GENNADIY

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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07/11/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/500,110	Applicant(s) MATSUOKA ET AL.	
	Examiner GENNADIY MESH	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6 -8 and 9 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6 -8 and 9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 12, 2008 has been entered.

Claims 1, 3, 4, 6-8 and 9 are pending in Application. Claims 8 and 9 are newly added. Rejection is maintained as it was set forth in previous office action mailed on February 12, 2008.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1,4 and 6 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al.(JP 2000-029247) in view of Hattori (US 5,665,510).

Nakanishi discloses composition for toner binder comprising, polyester resin contains structural units having polyester structure, structural units derived from styrene resin, structural units derived from epoxy group and structural units derived from polyisocyanate and structural unit derived from wax – see [0005],[0007],[0012], [0013] [0020] and [0023].

Nakanishi (JP 247) further discloses that polyester resin can be present in composition in the amount from 10wt.% to 90 wt.% (see [0018]), having Molecular weight in a range from 1000 to 20000 (see [0019]), hydroxyl value of less than 70 mgKOH/g(see [0010], acid number from 0 to 50 mgKOH/g and from 0.5 to about 2 mole equivalents of isocyanate groups for 1 mole of hydroxyl groups (see [0012]).

Nakanishi (JP 247) is silent regarding epoxy equivalent of epoxy group containing resin.

However, Hattori teach that toner binder resin (see lines 61 – 68,column 2) comprising polyester and polystyrene modified with epoxy group, wherein epoxy equivalent should be in range from 500 to 20,000 g/eq (see lines 65-67,column 3 and lines 1-9,column 4) and preferably in range from 1000 to 5000 g/eq in order to obtain pulverizable toner with optimized blocking properties.

Therefore, it would have been obvious to one of ordinary of skill to select polystyrene epoxy resin with epoxy equivalent taught by Hattori in order to obtain pulverizable composition for toner as it disclosed by Nakanishi (JP 247) with optimized blocking properties.

Regarding limitation of Claims 8 and 9 : Nakanishi disclose styrene content in range from 60 wt% to 99 wt% - this range meet limitation as " styrene content ... is 35 wt.% or more".

Note, that newly added limitation as "wherein the order of reaction is by reacting the polyester type resin ... with the epoxy group containing styrene type resin and further introducing the polyisocyanate" is in format of a product by process claim.

Case law holds that “even though product-by –process claims are limited by and defined by the process, determination of patentability is based on **the product itself**.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In this case, product disclosed by Nakanishi in view of Hattori appears to be substantially same as product claimed by Applicant, because it satisfied all product properties limitations of Claim 1.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al.(JP 2000-029247) in view of Hattori (US 5,665,510) as applied to claims 1,4 and 6 - 9 above, and further in view of Nakanishi et al.(US 6,992,150).

Nakanishi (JP 247) in view of Hattori disclose same basic composition for toner, but silent regarding Tg of polyester resin in binder composition.

However, Nakanishi (US 150) teach that polyester resin for binder toner should have Tg in a range from 30⁰ C to 80⁰ C in order to have necessary heat storage stability and low temperature fixing properties (see lines 45 – 52,column 5).

Therefore, it would have been obvious to one of ordinary of skill to select polyester resin with Tg in range from 30⁰ C to 80⁰ C per teaching of Nakanishi (US 150) in order to obtain toner binder composition as it disclosed by Nakanishi (JP 247) in view of Hattori.

Regarding limitation related to Molecular weight see Nakanishi (US 150) column 5, lines 15 – 45.

Response to Arguments

3. Applicant's arguments filed on June 12, 2008 have been fully considered but they are not persuasive.

Applicant's arguments based on statement that polymer composition disclosed by Nakanishi (JP 247) " does not meet the claims" polymer claimed by Applicant obtain by different process.

However, as it was explained in rejection above (see paragraph 1) determination of patentability is based on **the product itself**. The patentability of a product does not depend on its method of production. In addition, because all product properties limitation satisfied by Nakanishi in view of Hattori, it is reasonable to assume that product disclosed by Nakanishi in view of Hattori is substantially same as product claimed by Applicant, until factual results to the contrary can be shown.

Regarding Applicants arguments related to reason to combine Nakanishi with Hattori note, that rationale to combine reference was clearly stated in rejection(see paragraph 1): Hattori teach that specific range of epoxy groups (or epoxy equivalent) should be in range from 500 to 20,000 g/eq (see lines 65-67, column 3 and lines 1-9, column 4) and preferably in range from 1000 to 5000 g/eg in order to **obtain pulverizable toner with optimized blocking properties**.

It would be obvious to one of ordinary skill to apply this teaching to toner, comprising polystyrene modified by presents of epoxy groups in order to obtain pulverizable composition for toner with optimized blocking properties per teaching of Hattori.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh

Application/Control Number: 10/500,110
Art Unit: 1796

Page 7

Examiner
Art Unit 1796

/GM/

/VASUDEVAN S. JAGANNATHAN/
Supervisory Patent Examiner, Art Unit 1796